

RESULTS OF AN INVESTIGATION

INTO

THE CAUSES OF BLINDNESS:

WITH

PRACTICAL SUGGESTIONS

FOR THE

PRESERVATION OF THE EYESIGHT.

BY

SAMUEL CROMPTON,

SURGEON TO HENSHAW'S BLIND ASYLUM.

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RESULTS, &c.

IN the Annual Reports of Henshaw's Blind Asylum for 1840, 1841, 1842, 1843, and 1844, there appeared some brief remarks on the causes and prevention of blindness. I have now the honour of submitting to the Trustees a more comprehensive report on the same subjects; which contains the results of more extensive investigations, and embodies such advice and information for the prevention of blindness, as have been suggested to me by the melancholy cases of unnecessary or avoidable blindness which I witnessed during a long attendance at the Manchester Eye Hospital, and by those which are continually coming before me as one of the medical officers of Henshaw's Blind Asylum. In the course of the following report, I shall have to make such startling statements respecting the ignorance and carelessness of the public in the management of cases of threatened blindness, and respecting the numbers of those who are blind from avoidable causes, as will, I fear, be received with some degree of distrust. When I affirm that I believe that one-third of the blind in these kingdoms might have had their eyesight saved, or, in other words, that there are in Great Britain and Ireland about eight thousand persons whose eyesight has been lost by the most culpable negligence,—it is so startling an assertion, that many readers will naturally inquire whether this is not a conclusion derived from a hasty consideration of the subject. In order to meet this objection, I may observe that I have been specially collecting materials during nine years for the preparation of this report, and that it contains the results of seventeen years' observation. Some of the cases on which it is founded were collected at the Blind Asylum, and still more were obtained by calling upon the blind in this city and in the neighbouring towns and villages, and taking down the history of their blindness from their own dictation. Whatever the imperfections of the report may be, it is, at any rate, the result of a long continued inquiry into the subject; and I

believe that the assertions contained in it will be confirmed by subsequent inquirers.

There does not exist any return of the number of the blind in Great Britain and Ireland, but there is a return for a district in Yorkshire obtained by the Honourable and Reverend W. Vernon Harcourt, which affords data from which it is calculated that there are at least 24,000 blind persons in Great Britain and Ireland. That this is a near approximation to the number of the blind, appears probable from a comparison with the returns of other nations. I have examined several hundred blind persons, and I feel quite sure that at least one-third of them might have had their eyesight saved. When I say this, I wish to guard myself against the impression of being supposed to possess any secret remedy or means of cure by which I could have brought about so desirable a result if the cases had been under my own treatment. What I mean is, that the history of these cases is so clear, that there can be no doubt that the sight would have been preserved if they had been managed by *any* regularly educated medical man. In many of them no advice was obtained till the disease had nearly run its course, and the eyes were irreparably lost. In others, the loss of sight arose from the neglect of vaccination. If I put aside all those cases in which it appeared at all doubtful whether they had been judiciously treated, and take those who are (1) blind from the neglect of vaccination, (2) from neglect of early application for medical advice, or (3) from obtaining no medical advice until the disease had run its course, still I think that a third of all the blind would belong to these three classes. There are many other blind persons who became so from other causes than those just mentioned, respecting whom it is somewhat difficult to pronounce whether their blindness was, in every particular instance, *avoidable*. In these cases, however, one meets with so many instances of delay in obtaining the advice of a regularly educated medical practitioner; so many cases in which private recipes are tried, for some days or weeks at the commencement of the attack of disease in the eyes, without reflecting whether they are suitable or not; and so many instances of reliance on ignorant and mischievous quacks,—that I think it probable that nearly one-half of the total number of the blind in these kingdoms have become so from carelessness on their own part, or on that of their parents, or from neglect and ignorance.

If this calamity of *avoidable* blindness can occur so often in a nation where educated medical practitioners abound, and where there is an intelligent people, it is reasonable to suppose that it must occur still oftener in barbarous countries, and that the total number of the blind on the face of the earth must be very great indeed. In Japan it has been estimated that in every three hundred there is one blind; being more than three times the proportion in Great Britain and in Denmark. Blindness is even more common in Egypt. In short, if all the blind could be collected together, they would constitute an immense multitude,—probably a million and a half of souls; very few of whom were blind from their birth.*

Now the loss of sight is so great a calamity that if we view its occurrence in one individual only, according to its real importance, we ought to regard it as a very serious event. Blindness has been considered as the greatest calamity that can happen to any one, next to the loss of life. Judging of eyesight abstractedly, such an estimate would appear to be near the truth, for if we carry our minds back to the creation of man, and picture to ourselves our first parents, fresh from their Maker's hands,—endued with perfect health—free from sin—and blessed with every faculty in full perfection, *excepting eyesight only*,—how greatly would this single deficiency—this loss of one faculty,—have changed their condition from what we believe that it was, and their posterity's condition from what we know that it is! Deprived of sight man could hardly any longer be regarded as man. “He would be lower in the scale of creation than most of the beasts of the field. The species, if it did not perish, would at least have been confined to a few miserable individuals.” Instead of being Lord of the Creation, man would have been one of the lowest and most despicable of created beings. The deprivation of sight would render him at enmity with his own race and a prey to other animals. The privations he must undergo in obtaining sufficient sustenance would render him greedy and selfish, and it is not difficult to imagine that at times he would be driven to the extremity of devouring his offspring. He could never feel sure that his next step might not be upon a serpent, or that he might not

* For much interesting information respecting the blind (including remarks on the number of them), see Zeune's *BELISAR, oder uber Blinde und Blinden Anstalten*. Berlin, 1843.

at any moment be pounced upon by a beast of prey. The tone of anguish in which Samson bewails his loss of sight and his captivity, would be scarcely dolorous enough to be expressive of the misery of man's forlorn condition.

“ So many and so huge are all my miseries
That each apart would ask a life to wail,
————— but chief of all
O loss of sight, of thee I most complain,
Blind among enemies: O worse than chains,
Dungeon, or beggary, or decrepit age!
Light, the prime work of God, to me is extinct,
And all her various objects of delight
Annul'd, which might in part my grief have eased.
Inferior to the vilest now become
Of man or worm; the vilest here excel me;
They creep, yet see; I, dark in light, exposed
To daily fraud, contempt, abuse, and wrong,
Within doors or without, still as a fool,
In power of others, never in my own;
Scarce half I seem to live, dead more than half.”

Samson Agonistes, 66 to 80.

But whatever might have been the condition of man if the human race were all born without eyesight, we who see are so impelled to succour and commiserate the blind, that their helpless and dependant condition is rendered far less irksome to them. Yet if we consider how much is implied in the words “he has lost his sight,” we cannot but feel it to be a duty to do all that we can to prevent a single human being from becoming unnecessarily blind. To be blind is to be a burden to the community,—a dependant on the charity and kindness of friends,—“to have wisdom at one entrance quite shut out,”—to see no more the faces of friends,—in short, to become a stranger to many of the dearest blessings of life. How covetable the possession of eyesight is, appears from the anxiety of the blind to obtain it, provided that there seems to be the remotest probability of its restoration, though they may have to undergo a surgical operation for the purpose.

I proceed to give a description of the more common forms of blindness, distinguishing those which are curable from those which are incurable.

Some persons are born blind; but a great many of those who are said to have been born blind, became blind after birth. It is a common mistake to confound cases of real birth-blindness with those which arise from inflammation taking place in a few days after birth. It appears to be a law of nature that some persons shall be born blind; but

their numbers are comparatively few. Although it sometimes pleases the Almighty to visit a family with this calamity, it is so rare when compared with blindness produced by man's own neglect or vices, that we have much cause to wonder at the general perfection of eyesight at birth. A most irremediable form of birth-blindness does, however, sometimes happen, and in the form of a very heavy affliction to the parents. The following passage from a paper by Mr. Lucas, in the *Medical Observations and Inquiries*, 1784, vol. vi, page 263, records the occurrence of birth-blindness in five children of the same father (and probably of the same parents, for it is not mentioned that they were by different mothers). "The two eldest of the five blind children of the Rev. Mr. Hall, of Leaven, near Beverley, have been lately some weeks at Leeds, under my care; they were also visited by my Infirmary colleagues, Mr. Hey and Mr. Jones. We had an opportunity of seeing the other three children at York, some time before. They were all born blind, none of them can distinguish light from darkness, and although the pupil is in common neither too much dilated nor contracted, and has motions, yet these do not seem to depend on the usual causes, but are irregular. They are in different degrees idiots, and are in almost perpetual motion, with one limb or other, in a manner resembling St. Vitus's dance; hence it is probable there is some peculiarity in the structure of the brain."

I possess the particulars of several other instances, in which birth-blindness has occurred in two or three children of the same parents. In none was there any obvious cause for it. Some of the children were idiotic, others were born with every faculty perfect except eyesight. It may happen in the offspring of parents who appear to be perfectly healthy; and I have reason to think that two or three blind and idiotic children may be born of such parents. On the other hand, I am not aware that there is a much greater tendency to birth-blindness among the children of blind parents than of seeing. I do not recollect to have seen any instance of birth-blindness in the children of blind parents; but in the *Miscellanea Academiæ Naturæ Curiosorum*, for the year 1696, there is an account of blindness in five of the children of a blind father. I have examined a young man who is blind and idiotic; the father and mother appeared to me to be remarkably healthy and well made; they had had five children, four of whom were born blind; two of them are

living and are idiots. The fifth child is of sound mind and can see. The father told me that for a long time he thought that no parent had ever been so sorely afflicted as himself, but he heard of another couple who had at least three, he thinks four, blind and idiotic children. He went to see them, found them tied in chairs (they were so utterly helpless); all blind, and in other respects much worse than his own. He said, "I went away thankful that my own calamity was not so great as that man's." He mentioned to me several families in which two or three children were born blind, and I possess the addresses of others.

Two blind children were brought to me in 1846, from Yorkshire; they were born of the same parents, were very intelligent, and their eyes appeared to be perfectly formed. One was three years and a half old, the other was fifteen months. The mother said she had heard of a woman who had six children born blind. In most of these cases no improvement can be obtained from medical skill. In a few the sight can be restored by an operation on the eyes; in these latter cases the disease is Cataract.

Medicine can do much for the cure of the next complaint of which I am about to speak, namely, the Purulent Ophthalmia of infancy, a disease which occurs soon after birth, and is a most fertile cause of blindness. The dangerous nature of this complaint is so little understood by mothers, that the most heart-rending examples of blindness from this disease are continually being presented to surgeons. During the period of my attendance at the Manchester Eye Hospital, I saw a very large number of children brought for medical aid, when the complaint had run its course, and the eyes had been destroyed by it. A still larger number were brought just in time to have their sight saved. It was quite painful to observe the apathy of the parents. Mothers would allow the complaint to go on for some weeks, during which time they were using applications that were perhaps *directly* hurtful, or they were wasting precious time in using others which could be of no service, and which were therefore *indirectly* most injurious, for in all curable diseases, not to do good is to do harm. During the nine years that I have examined the candidates for admission into Henshaw's Blind Asylum, very few elections have occurred at which one or more persons, blind from this disease, have not presented themselves. Yet there is no complaint of the eyes which, in general, is so manageable as this, if it is treated

according to the rules of medical art at the very onset of the attack. In confirmation of this assertion respecting the tractable nature of the complaint, I will give some quotations from ophthalmic writers of acknowledged eminence.

There is a singular contrast between the violence of this disorder in newly-born children, and the serious consequences to which the inflammation so rapidly leads, and the readiness with which it yields to suitable treatment. Hence, if we see a case of purulent ophthalmia before any injury is done to the cornea, we may assure the parents, and it gives us great pleasure to be able to do so, that sight will not suffer. If the inflammation be confined to the palpebræ, or even if it has extended to the globe, provided the cornea remains clear, it cannot be considered as attended with risk; for, by the adoption of proper means, all injurious consequences to the organ will be averted; even the most violent form is easily manageable, and will do well when properly treated. But if the disease has advanced so far that the cornea has sloughed, or extensively ulcerated, loss of sight is unavoidable.—(Lawrence on Diseases of the Eye, 2nd edition, 1840, page 224.)

The next quotation is from Dr. Mackenzie, and contains a description of the symptoms of the complaint, well worth the perusal of mothers.

It is commonly on the morning of the third day after birth, that the eyelids of the infant are observed to be glued together by concrete purulent matter. On opening them, a drop of thick white fluid is discharged, and on examining the inside of the lids, they are found extremely vascular and considerably swoln. First one eye is affected, and in a few days the other also. If neglected, as this disease but too often is, or treated with some such useless application as a little of the mother's milk, the lids swell externally and assume a dark red colour, the inflammation of the conjunctivæ rapidly increases, and the purulent discharge becomes very copious. The infant keeps the eyes constantly shut. In this state the eyes may continue for eight days, or a few days longer without any affection of the transparent parts, except perhaps slight haziness of the cornea. About the 12th day, however, the cornea is apt to become infiltrated with pus, its texture is thereby speedily destroyed, it gives way by ulceration, first of all exteriorly to the pus effused between its lamellæ, and then through its whole thickness, and this either in a small spot only, or over almost its whole extent; so that sometimes we find only a small penetrating ulcer with the iris pressing through it; in other cases the whole cornea gone, the iris exposed, and the humours protruding through the pupil. The lens often comes away. A poor woman from Paisley, who had trusted to the opinion of her midwife, that the disease was common and not at all dangerous, brought me her child, aged five weeks. She had with her, wrapped up in a bit of rag, the left lens, dry and shrivelled, it having that morning been discharged through the ulcerated cornea. I put it in water for a few hours, when it became plump and transparent. It was enclosed in its capsule. On submitting some shreds of the lens to the microscope, the fibrous texture was quite evident. The right cornea was opaque, and partly ulcerated. It is melancholy to reflect on the frequency of destroyed vision from this disease, especially as the complaint is completely within control, if taken in time and properly treated. The attendants are not alarmed sufficiently early, by what they consider as merely a little matter running from the eye.—(Mackenzie on Diseases of the Eye, 3rd edition, 1840, page 400.)

Such are the sentiments of two of the best writers on eye-surgery. It will be observed, that they regard the

complaint as easily curable if treated scientifically at the commencement. Occasionally, however, cases do occur which are very unmanageable, but these are rare exceptions to the rule. To illustrate the negligence which takes place in this class of cases, I will give some extracts from my note book.

Nov. 26, 1841. Called upon Hannah E., aged $2\frac{1}{4}$ years. Inflammation was perceived when she was two days old. It was immediately pointed out to the midwife, who told them to wash the child's eyes with cream, and requested the mother "to milk her breasts into them." She was not taken to a proper surgeon till she was six weeks old, when she was told that the eyes were lost. She has a bare perception of light. When she was a year and a half old she had the small pox, so that if she had not been already blind, she might have become so from the small pox. She had not been vaccinated.

Dec. 29, 1841. John B., aged 5 months. Seems just able to perceive light. Both eyes covered with dense opacities. On the third day after birth, both eyes were swelled and discharged a great deal. Her midwife told her that it was "*a shot of cold*" in the child's eyes, and ordered her to milk her breast into them. She afterwards sent for an herb doctor. Afterwards went to a regular surgeon. Did not go to the Eye Hospital till the child was four months old, though she did not live a mile from it.

Dec. 28, 1841. M. A. H. æt. 15. Mother attended by a midwife who did not warn her of the danger of the loss of sight, but ordered her to apply chamomile tea to the eyes. She said that the child had got a cold in its eyes. She afterwards went to a regular surgeon, who gave her a lotion, which she used *during the day only*, instead of day and night.

The above instances will be sufficient to show how it happens that this complaint terminates in blindness. In all of the above cases, useless or mischievous remedies were tried till the complaint had proceeded so far as to destroy the eyes.

The RULE in all cases whatever of suspected or obvious mischief in a child's eyes should be to apply *immediately* for advice to the medical attendant of the family, or some regularly educated medical man. Not a moment ought to be lost if there be a discharge from the eyes. The medical man would say whether the case required treatment, and if

it did so, he would at once adopt efficacious measures. This is the best course for even a poor man to adopt. It is safer and certainly far more economical than using domestic remedies, or putting himself into the hands of quacks. From inattention to this rule, it happens that complaints, which if treated early by a skilful practitioner, would have been cured at a small charge, become confirmed, and the patient, after wasting his time and his health, is at length compelled to get better advice at that stage of the complaint when medicines can do much less good, and when, in consequence, a longer time will be required for the cure.

The purulent ophthalmia of infancy when it does not terminate in blindness, frequently produces imperfect vision by leaving opacity of the cornea, or what is commonly termed a *pearl*. Many who escape blindness remain for years, or perhaps for life, with imperfect sight, owing to the existence of these opacities or pearls. Here then is an additional reason for an early attention to the purulent ophthalmia of infancy, in order that the inflammation may be cut short in the beginning, and prevented from running so high as to end in the production of these opacities. It will be satisfactory to parents to know that opacities of the cornea which in infancy seem to be so dense that there would appear to be no hope of their removal to such an extent as to afford any useful degree of vision, do, in the course of a few years, so far clear up as to enable the patient to find his way, or perhaps to read. Four or five years ago I saw a case in which the opacities were so dense that there appeared to be no reasonable hope of a restoration of any useful degree of vision. The mother, however, requested me to try what could be done, and she was most diligent in the use of remedies for a year or two. The child is now able to read, although she is very short-sighted. This case had been considered hopelessly and irremediably blind. It shows how much nature can do when perseveringly assisted by art.*

There are cases of opacity of the cornea left by purulent ophthalmia in which the patient has a small amount of vision (often only a bare perception of light), but about the age of fifteen such changes take place in the eye as end in total blindness.

There is another caution which I ought to give respect-

* Since I wrote the above, her mother called upon me with some yards of lace which the child had made.

ing the purulent ophthalmia of infancy, which is the following, viz., to take great care that none of the matter discharged from a child's eyes be allowed to get into the eyes of any of the attendants, as it may, and probably will, produce the same disease in them.

SMALL POX is a very fertile source of blindness, and an account of it naturally follows the description of the last disease; for, like it, it chiefly commits its ravages on the eyes of children, and parents are altogether responsible for the calamity of blindness when it occurs, because they might have prevented it by getting their children vaccinated. I have examined a considerable number of persons blinded by small pox, yet I have never found a case in which loss of sight happened to a person who had been vaccinated. I think it possible that such a result may follow vaccination, just as small pox may occur after vaccination and be mortal. But such an event would be so exceedingly rare, that it does not destroy our confidence in the protective power of vaccination. On the contrary, the world possesses a mass of evidence in favour of it sufficient to make any reflecting mind regard it as a great blessing to mankind, and as our sheet anchor against the ravages of small pox. To say that small pox occasionally follows vaccination, is a very weak argument indeed for discarding vaccination altogether, as some do. Mathematical certainty is never to be expected in the calculations respecting the human frame. If medical men were to discard each remedy that occasionally fails to cure, or disagrees with a patient, their list of drugs would be a very short one. A few grains of blue pill or of calomel have been known to kill a man, nevertheless both the world and the profession have confidence in the efficacy of blue pill and calomel. Yet we cannot be quite sure that these remedies may not be most pernicious to the next person upon whom they are tried. This uncertainty hangs over everything connected with human life. Actions of the slightest kind and done with the best intentions, may lead to most disastrous results. And if a man was to refuse to act at all, because what he had to do might prove a failure, or be attended with risk, we should think him mad. And we should blame him if he did not exert himself earnestly in a case where the chance of success was not only doubtful, but greatly against him. And so it is with respect to vaccination. To expect that it will be in all cases

a preservative against small pox, is to expect a degree of certainty which would be an exception to the laws under which man appears to be placed in the world. If it could be shown that vaccination was but of a very limited degree of utility,—that in three cases out of ten it protected against the small pox,—I think that most reflecting men would adopt it. Nay, if there was no further evidence in its favour than that it merely rendered the attack of small pox more mild, and did not prevent its occurrence,—some would think this a sufficient reason for its adoption. But, when we know that it is an absolute preservative against it in thousands of cases,—and that where small pox does occur after it, its virulent nature appears to be destroyed,—it seems strange that any one should neglect to have his children vaccinated. If vaccination does all this in nine hundred and ninety cases, is it to be discarded because it fails in the remaining ten? Let him answer who has seen cases of natural small pox in all their loathsomeness;—who has witnessed the horridly distorted countenance, smelt the offensive exhalation, felt the anxiety of a relative for the patient's safety, seen his swollen eyes, and remained in uncertainty for many days whether his sight, nay, whether his life would be saved. The following particulars may have some influence with parents. Small pox frequently causes lasting blindness or imperfect sight. I have seen a great many cases, but never, as I remarked before, a case in which injury to the eyes occurred from small pox arising in a person who had been vaccinated. The previous vaccination generally weakens the attack, so that there is not a disfigurement of the face or eyes. As proofs of the blameable lukewarmness of some persons with respect to vaccination I quoted in a former Report the following examples:—

J. B. aged thirty years, lost his eyesight by small pox when he was six years old. When I called upon him, *he had a child nineteen months old, which had not been vaccinated.* The father confessed that he was aware that if he had been vaccinated, his own eyesight would have been saved, and yet he was delaying to have his child done. He said it was his opinion that vaccination “was a very fine thing, and he intended to have his child vaccinated *some time.*” I visited another blind man, John G., who became blind from small pox when he was two years old. He had a child three months old unvaccinated. Martha J. became blind of small pox when she was two years old. She is married. She has a child nine months old *unvaccinated.* The above persons could not have been deterred by the expense of vaccination, for I visited them subsequently to the introduction of the new vaccination act. Martha J. lived not more than two hundred yards distant from a vaccinator's residence. To such persons as have not been accustomed to investigations among the labouring population, it will

appear almost incredible that persons can exist so careless of their offspring, as to neglect to have them vaccinated, when they themselves had lost their eyesight by small pox, and knew it would have been preserved if they had been vaccinated. If the blind, who are in general very intelligent, neglect their children under these circumstances, it may be presumed that vaccination will be still more neglected by such persons as have no relatives whose eyesight has been destroyed by small pox. Such appears to be the fact. According to the registrar-general's report, more than 16,000 persons died of small pox in England and Wales during 1838. It is very probable that a very large number died in Scotland and Ireland during the same year, but there are no returns from those kingdoms.

I visited a blind girl of the name of Elizabeth G., who lost her sight from small pox when she was four years old. Her mother told me that she had heard so many reports respecting bad matter, that she determined to leave her child unvaccinated. Small pox appeared in the neighbourhood, her daughter caught it, and became blind; her son also caught it, and died shortly afterwards; and another person's child residing with her also died of it.—(Henshaw's Blind Asylum Report, 1844.)

Parents ought to consider whether, in the event of the death or blindness of a child, they are not responsible. When vaccination is within the reach of every one, and when its value has been admitted by nearly all the world, they ought to be possessed of very strong reasons for neglecting to adopt it, and more particularly for *refusing* to employ it. A very able writer, and clear thinker, in alluding to the deaths from small pox in London, says that the parents of these dead children are as much to blame as if they had taken them to London Bridge and cast them into the Thames. Undoubtedly, those parents who will not have their children vaccinated ought to live apart from the rest of mankind. However much they may be opposed to vaccination, they cannot think it desirable that their children should have the small pox, or that it was the intention of Providence that they should have seared faces or be blind. Therefore they ought to go and live in some secluded spot, keep themselves apart from the world, and if they should happen to be visited by the scourge, they should perform rigid quarantine, lest they should impart it to others. When the *catching* nature of this complaint is taken into account, it is plainly an act of injustice to his neighbours if a man brings the small pox into his family, or does not take the same precautions against it that they have done.

The next form of blindness is AMAUROSIS. It occasionally happens as a form of birth-blindness, but it is very rare. It is a complaint which is a frequent cause of blindness of the most incurable kind. It occasionally takes place

during childhood as an effect of hydrocephalus, or inflammation of the brain. It generally occurs, however, later in life, and may arise from a great variety of causes. In some cases it is curable. The *rule* for those threatened with this form of blindness, *is to obtain the best advice without loss of time*. In a complaint which depends on so many different causes, and which is so often fatal to vision, it is very unwise to neglect this rule, or to expect that a half knowledge of diseases of the eyes is enough, or that a book or domestic medicine will give the means of cure.

Wounds, and other mechanical injuries of the eyes, are very common causes of blindness. It is not generally known that a wound of one eye may be the cause of blindness in both. I have seen many instances of such a result.

I will enumerate some cautions respecting injuries of the eye.

A child ought not to be allowed to play with scissors, forks, arrows, or pointed instruments in general. I have seen blindness of both eyes produced by a fork slipping into one eye while a little boy was stooping and untying a knot on his shoe-tie with the fork. I have known the eye destroyed by the fork slipping into the eye while a little boy was picking a currant out of a bun. Numerous cases have occurred in which children have punctured their eyes when playing with sharp instruments. In some cases one eye has been destroyed, in others both. Arrows, though they may be blunt, are very dangerous things, and often occasion blindness.

I have several times seen blindness produced by a pea projected from a pea-shooter.

Percussion caps are very dangerous to sight. I have seen blindness of both eyes produced by a fragment entering one of them in shooting. I have seen several children's eyes destroyed or greatly injured by fragments of caps flying into them when the children were amusing themselves with exploding them with a hammer.

There is danger to the sight from standing near to persons who are shooting. Many eyes have been destroyed by a shot striking or entering the eye.

But it would be impossible to enumerate the different kinds of ways in which the eyes may be mechanically and accidentally injured. The foregoing cautions are the chief which occur to me. Adults are generally alive to danger; but children need to be narrowly watched, and to be cau-

tioned against the danger of playing with pointed instruments or percussion caps or gunpowder.

After *measles* and *scarlet fever*, there frequently occurs a kind of inflammation of the eyes which is apt to be overlooked. It generally appears to be so mild and unimportant as to occasion no alarm, but it is a not unfrequent cause of blindness. The eye partakes in the general debility of the system following the fever, and cannot resist the effects of even a slight degree of inflammation. Hence the importance of early attention to this form of inflammation, or to inflammation arising during recovery from any fever or in debilitated persons.

Whoever expected to find in this report, recipes for the cure of the different diseases mentioned in it, will be disappointed; but when he becomes acquainted with my reasons for withholding them, I hope they will appear satisfactory. In the first place, then, there is no disease that I have mentioned for which one and the same recipe would be always useful. The nature and degree of the inflammation, the stage of it, the age of the patient, and a variety of other circumstances, which no one but a medical man can judge of, would all have to be taken into account in the treatment of any one of these diseases of the eyes. So that I should certainly have done great harm by trying to teach the public how to cure of themselves any of these complaints. I do not conceal this information from a belief that it would injure my profession, but from a strong conviction that attempts to cure any disease whatever by books on domestic medicine or by recipes, will in ninety-nine cases out of a hundred cost more than if a regular medical practitioner had been employed. The error in inflammations of the eyes is in not applying for medical aid at the beginning of the disease. In a few hours an inflammation may have advanced so far as to be incurable. In all cases, I would recommend that an application be immediately made to the regular medical attendant of the family, and to abide by his advice. If he thinks that further medical aid is necessary, he is more likely than the patient to know who is the most skilful practitioner in such a disease. Further, I strongly caution the public against applying to itinerant advertising medical men. I possess a many particulars respecting some persons who will settle in a town and advertise that they are able to cure all forms of blindness. Some years ago, a man of this kind made his appearance in this city, and undertook to cure those

who were quite blind. He insisted on a deposit of several pounds from each person,—and where he thought he could obtain it, he would after a month or two say that he required a further sum to complete the cure. I know of instances of persons receiving parochial relief, having collections made for them in order to place themselves under the care of one of these persons; and it is calculated that he got about £300. in Manchester in a few months. He decamped, leaving the incurable cases of blindness still incurable. Now if the public in general would act as well educated people do, and be guided by their own medical men in the selection of further advice, such impostors could not succeed. It is a mistake to suppose that the medical profession set their faces against new discoveries. When they oppose any new thing, it will generally be found that there is something either in the character of the propounder or in the thing recommended, which will not bear a close scrutiny, or that it requires further investigation before it can be safely used.

The following is a summary of the practical rules for the guidance of the public in the preservation of eyesight.

1. Let every child be vaccinated early in life.—(See pages 12 to 14.)

2. Obtain advice, immediately, for an infant from whose eyes there is a discharge of matter.—(See pages 8 to 12.)

3. Remember that the redness of the eyes which follows measles and scarlet fever may end in blindness, and, therefore, do not neglect it.—(See page 16.)

4. Caution children against exploding percussion caps or gunpowder, and to be careful when using sharp instruments, such as forks, scissors, arrows, &c. &c. Young children ought not to be allowed to use them, or to play with them.—(See page 15.)

5. If an eye has been wounded by any sharp instrument, bear in mind that the injury done to that eye may lead to

the destruction of the other likewise, and, therefore, be the more diligent in obeying the instructions of your medical adviser.

6. Above all things, pay early attention to any symptoms of disease of the eyes; and instead of trying domestic remedies, go at once to your ordinary medical attendant, and follow his instructions faithfully.